

What is claimed is:

1. A harness slack take-up structure for taking up a slack of a harness extended from a steering wheel, comprising:

- 5 a steering shaft to which the steering wheel is fixed;
- a steering column configured to rotatably accommodate the steering shaft and slidably together with the steering shaft in a longitudinal direction thereof;
- the slack of the harness, the harness being extended from the steering wheel in a forward direction along the steering column;
- 10 a slack holder configured to contain the slack of the harness;
- a movable part movable in the slack holder, configured to slide with the steering column in a front-rear direction; and
- a fixed part relatively fixed to the slack holder,
- a first end of the slack being held by the movable part and a second end thereof being
- 15 held by the fixed part.

2. The harness slack take-up structure of claim 1, wherein the slack holder is fixed relative to a vehicle body, and the second end of the slack is fixed substantially at the center of a moving range of the movable part.

- 20 3. The harness slack take-up structure of claim 1, wherein the first end of the slack is zigzagged in the movable part so that the first end is held by the movable part.

- 25 4. The harness slack take-up structure of claim 2, wherein the first end of the slack is zigzagged in the movable part so that the first end is held by the movable part.

5. The harness slack take-up structure of claim 1, wherein the movable part and the fixed part are arranged to always face each other with the slack between them.

- 30 6. The harness slack take-up structure of claim 1, wherein:
 the slack holder is fixed relative to the steering column;
 the movable part is a fixed shaft fixed to the slack holder;

the fixed part is a movable shaft fixed relative to the vehicle body and is slidable along a long hole formed in the slack holder; and

the fixed shaft is fixed at a position substantially corresponding to the center of a moving range of the movable shaft.

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7. The harness slack take-up structure of claim 6, wherein the slack is laid around the movable part and the fixed part in a four-leaved clover pattern drawn with a single stroke.

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8. The harness slack take-up structure of claim 1, further comprising:

a second slack holder fixed relative to the steering column, having an inner cylinder through which the steering shaft is passed, an outer cylinder rotatably attached to the inner cylinder, and a cylindrical hollow formed between the inner cylinder and the outer cylinder; and

a second slack of the harness formed between the slack of the harness and the steering wheel, the length of the second slack corresponding to a range in a rotational angle of the steering wheel, a first end of the second slack being held by the inner cylinder, a second end of the second slack being held by the outer cylinder, the second slack being stored in the cylindrical hollow.

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9. The harness slack take-up structure of claim 2, further comprising:

a second slack holder fixed relative to the steering column, having an inner cylinder through which the steering shaft is passed, an outer cylinder rotatably attached to the inner cylinder, and a cylindrical hollow formed between the inner cylinder and the outer cylinder; and

a second slack of the harness formed between the slack of the harness and the steering wheel, the length of the second slack corresponding to a range in a rotational angle of the steering wheel, a first end of the second slack being held by the inner cylinder, a second end of the second slack being held by the outer cylinder, the second slack being stored in the cylindrical hollow.

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10. The harness slack take-up structure of claim 3, further comprising:

a second slack holder fixed relative to the steering column, having an inner cylinder through which the steering shaft is passed, an outer cylinder rotatably attached to the inner cylinder, and a cylindrical hollow formed between the inner cylinder and the outer cylinder; and

a second slack of the harness formed between the slack of the harness and the steering wheel, the length of the second slack corresponding to a range in a rotational angle of the steering

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wheel, a first end of the second slack being held by the inner cylinder, a second end of the second slack being held by the outer cylinder, the second slack being stored in the cylindrical hollow.

11. The harness slack take-up structure of claim 4, further comprising:

5 a second slack holder fixed relative to the steering column, having an inner cylinder through which the steering shaft is passed, an outer cylinder rotatably attached to the inner cylinder, and a cylindrical hollow formed between the inner cylinder and the outer cylinder; and

10 a second slack of the harness formed between the slack of the harness and the steering wheel, the length of the second slack corresponding to a range in a rotational angle of the steering wheel, a first end of the second slack being held by the inner cylinder, a second end of the second slack being held by the outer cylinder, the second slack being stored in the cylindrical hollow.

12. The harness slack take-up structure of claim 5, further comprising:

15 a second slack holder fixed relative to the steering column, having an inner cylinder through which the steering shaft is passed, an outer cylinder rotatably attached to the inner cylinder, and a cylindrical hollow formed between the inner cylinder and the outer cylinder; and

20 a second slack of the harness formed between the slack of the harness and the steering wheel, the length of the second slack corresponding to a range in a rotational angle of the steering wheel, a first end of the second slack being held by the inner cylinder, a second end of the second slack being held by the outer cylinder, the second slack being stored in the cylindrical hollow.

13. The harness slack take-up structure of claim 6, further comprising:

25 a second slack holder fixed relative to the steering column, having an inner cylinder through which the steering shaft is passed, an outer cylinder rotatably attached to the inner cylinder, and a cylindrical hollow formed between the inner cylinder and the outer cylinder; and

a second slack of the harness formed between the slack of the harness and the steering wheel, the length of the second slack corresponding to a range in a rotational angle of the steering wheel, a first end of the second slack being held by the inner cylinder, a second end of the second slack being held by the outer cylinder, the second slack being stored in the cylindrical hollow.

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14. The harness slack take-up structure of claim 8, wherein the inner cylinder has a guide to spirally guide the harness.